Jan. 8, 1963 Z. W. MANN 3,072,784

POLE LAMP

Filed Dec. 14, 1959

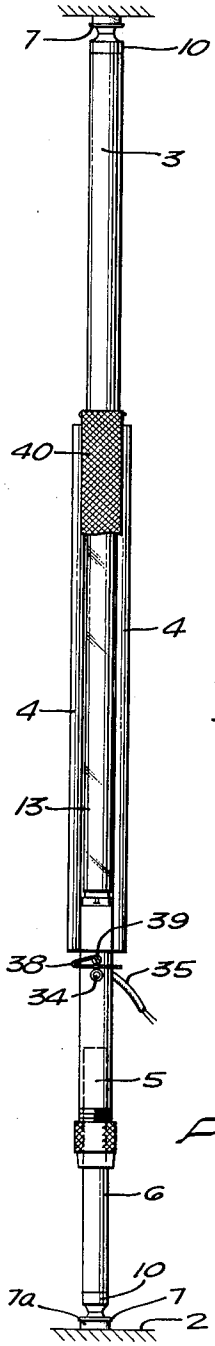


FIG. 1.

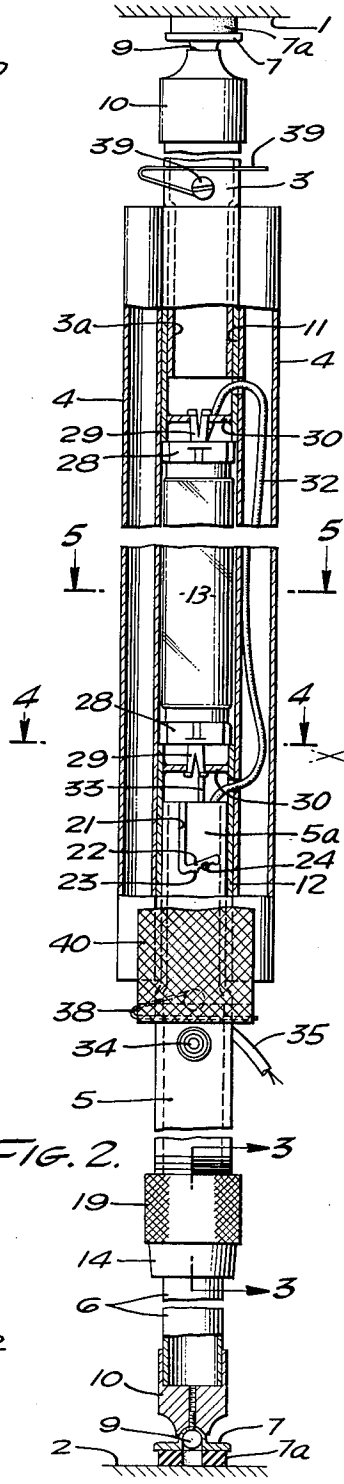


FIG. 2.

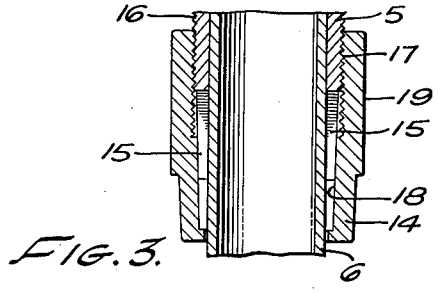


FIG. 3.

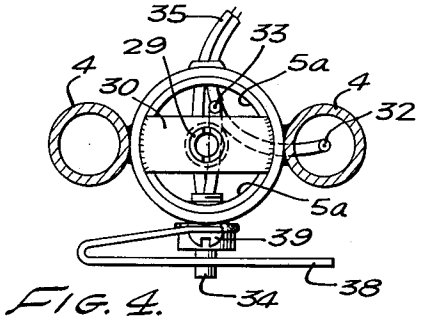


FIG. 4.

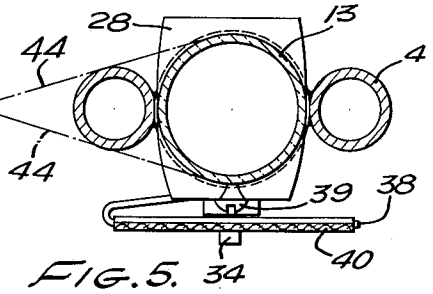


FIG. 5.

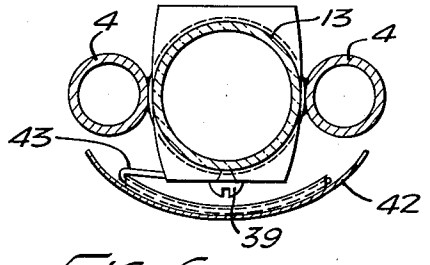


FIG. 6.

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POLE LAMP

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19 Claims. (Cl. 240—81)

This invention relates to a lamp capable of being readily moved from place to place and held supported between floor and ceiling in a room in order to provide area and decorative lighting, and more particularly to a pole lamp in which a fluorescent lamp forms a part of the pole intermediate its ends.

Generally speaking, the earlier pole-type lamps have been made and used to provide spotlight effects in various parts of a room. Usually they have had three pivotable brackets extending outwardly from a central pole for the mounting of incandescent lamps and their shades. The lamps must be adjusted individually so as not to disturb persons sitting in the room and have the objectionable characteristics that if one lamp is directed for the benefit of a person reading in one chair, it may at the same time be positioned so as to shine into the eyes of another person.

Pole lamps, according to the prior art, are generally spring-loaded so as to be engageable between the floor and ceiling. Spring-loaded lamps have a disadvantage in that over a period of time the springs weaken and the lamps must be adjusted to stay in place. In addition, if the spring is strong enough to be effective, it makes the pole difficult to handle during installation.

The present invention eliminates the prior art difficulties through the elimination of plural incandescent lamps mounted on brackets, and through the elimination of spring means to hold it in place between the floor and ceiling.

It is a primary purpose of the invention to provide a pole-type lamp having an axially aligned fluorescent lamp in the central section of the pole which may serve to light a portion of a room directly, with or without the use of a translucent shade, or to light a room indirectly by means of a reflector.

It is an object of the invention to provide an improved pole-type lamp suitable for both utility and decorative lighting.

Another object of the invention is to provide a pole-type lamp having shading means which eliminates glare and at the same time provides sufficient lighting for the room.

Still another object of the invention is to provide a pole-type lamp having a non-translucent reflector to direct light to a portion of a room and to indirectly light other portions of the room.

A further object of the invention is to provide a fluorescent or other type of elongated lamp in a pole lamp to illuminate living spaces, the pole lamp being readily movable from place to place, and when positioned being held supported between the floor and the ceiling.

The invention with its features and advantages will be further understood from the following detailed description and from the accompanying drawings.

In the drawings, which are to be regarded as illustrative:

FIGURE 1 is an elevational view of the invention with part of the shade cut away;

FIGURE 2 is an enlarged elevational view of the lamp supported between a floor and a ceiling showing the struture in greater detail;

FIGURE 3 is a transverse section on the line 3—3 of FIGURE 2;

FIGURE 4 is a transverse section on the line 4—4 of FIGURE 2;

FIGURE 5 is a transverse section on the line 5—5 of FIGURE 2; and

FIGURE 6 is a view of the lamp similar to FIGURE 5 but showing the use of a reflector.

Referring again to the drawings and to the embodiment shown in FIGURES 1 to 5, inclusive, in particular, in FIGURES 1 and 2, the pole lamp is shown supported between a ceiling 1 and a floor 2, the entire lamp being in effect a single elongated rigid pole. The pole structure is formed by an upper tubular section 3; two central or intermeidate, spaced, tube sections 4 connected at their upper ends to section 3; a lower tube section 5 comprising a lower counterpart of upper section 3 but adjustably connected to intermediate sections 4 and having a reduced diameter upper end 5*a*; and a small diameter lowermost foot section 6 adjustably connected to section 5. The spaced tubes 4, 4 are fixedly connected at their upper ends at diametrically spaced points to the exterior of a sleeve 11 and at their lower ends are similarly connected to a sleeve 12. The former telescopically and fixedly seats the upper tube 3 and the latter telescopically and adjustably seats the lower tube 6. At the upper end of upper section 3 and at the lower end of section 6 feet 7, including thick pads 7*a* of felt or similar resilient material, are positioned, the feet being connected for angular adjustment relative to the pole through ball and socket joints 9 and connector cups or sleeves 10 which seat the pole ends.

As may be best seen in FIGURE 2, a longitudinal adjustment means is provided by which lowermost tube 6 is slidably seated in lower tube 5. In order to clamp tubes 5 and 6 in selected longitudinal adjustment, tube 5 is provided at its extremity with circumferentially-spaced longitudinal slots 15 and is exteriorly tapered. A tapered sleeve 14 slidably engages exteriorly the extremity of shorter tube 5, its internal diameter decreasing at 18 in the direction of tube 6. The upper portion of sleeve 14 has internal threads 17 engaged with external threads 16 on tube 5. Thus, when sleeve 14 is rotated to move upwardly on the threads 16, the internal tapered surface 18 tightens on the tapered slotted end of tube 5 compressing the latter and forcing it to grip tube 6 securely. To aid in rotating sleeve 14 it is provided with an external knurled surface 19 so that it may be gripped more securely.

The adjustment between tubes 5 and 6 secured by the clamping sleeve 14 may be viewed as a rough adjustment.

To exert the proper holding force between the pole and the floor and ceiling and to compress the resilient pads to just the right extent, additional adjustment means are provided and is best seen in FIGURES 2 and 3. The presence of this second or fine adjustment and the resilient pads eliminates the need for the conventional spring used in prior art structures to hold the pole lamp in proper supporting relationship with the floor and ceiling. In this so-called fine adjustment the small diameter portion 5*a* of the tube 5 is slidably and adjustably engaged within the spacer sleeve 12. Spacer sleeve 12 is provided with an inwardly projecting pin 24 sized to pass into a slot 21 in reduced end 5*a* of tube 5 in a bayonet and slot relationship, the inner end of slot 21 connecting to a sloping angular extension 22 formed along one of its sides with spaced seats 23 sized to seat pin 24. The relationship is such that with the pin 24 seated in slot 22 the rotation of the tube 5 relative to the sleeve 12 moves the pin 24 along the slot 22 which acts as a cam for the pin to lengthen or shorten the pole, depending upon direction of relative rotation. With the resilient pads 7*a* on the ends of the pole, the pole is easily elongated and tightened between floor and ceiling, the pads 7*a* acting as resilient take-ups. Thus, the combination of the rough adjustment means, the fine adjustment means, and the resilient pads provides a pole which can be first approximately or

roughly adjusted between floor and ceiling and then finely adjusted by rotating one section through a small arc relative to another section slidably engaged therewith. This combination has all the advantages of the prior art structures in which a spring is used, but none of the disadvantages.

A typical fluorescent lamp socket **28** is secured in the inner end of each of the spacer sleeves **11** and **12** by means of a split rivet **29** carried by a transverse plate **30** welded into each of the spacer sleeves **11** and **12**. A lamp **13** is typically secured for operation in the sockets **28**.

Electrical current is supplied to lamp **13** by means of external electrical leads **35** which may be connected into a conventional wall socket by means of a plug. These leads **35** are connected to toggle switch **34** and extending from the switch, within the tubes, are the electrical leads **33**, connected to the lower socket, and the electrical leads **32**, connected to the upper socket.

The pole lamp may, of course, be used without any shading over the lamp. However, the bare lamp for certain uses would cause considerable glare. To prevent such glare and to add to the decorativeness of the lamp, an elongated translucent shade **40** may be provided on one or both sides of the lamp, as shown in FIGURES 1, 2 and 5. The shade **40** is held in place by means of U-shaped shade supports **38** in the form of strong springs or brackets at its ends which are secured to the tubes **3** and **5** adjacent the ends of the lamp by screws **39**.

If direct lighting is desired against a wall and indirect lighting is desired in other parts of the room, a non-translucent reflector **42**, as shown in FIGURE 6, may be provided. Reflector **42** is secured in a manner similar to shade **40** to tubes above and below the lamp by supports **43**, held in place by the screws **39**. In a preferred form, such a reflector would be curved and it would therefore be desirable that the outer portions of supports **43** be also curved, as shown in FIGURE 6.

An interesting feature of the invention is illustrated in phantom lines **44** in FIGURE 5. These converging lines indicate by the area they enclose the small amount of non-directly lightable area on each side of the lamp and also illustrate that the directly lightable area of the lamp is considerable in comparison to the non-directly lightable area. This great extent of direct lighting is not possible with other types of pole lamps unless the light source is elongated and in axial alignment with the pole. It should be understood that for 360° around the lamp **13** there is no completely unlighted area, but only directly lighted and indirectly lighted areas.

While the lamp constructed in accordance with the disclosed invention has been described as mounted between floor and ceiling it is to be understood that its use is not so limited. It is adapted to be positioned in a similar manner between any two spaced opposing surfaces including spaced vertical walls and posts.

It can be seen readily that the pole lamp embodying the present invention provides the utilitarian advantages of large additional lighting area, a combination of direct and indirect lighting, axial alignment of the lamp with the pole, the elimination of a supporting spring, and also is unusually decorative as a result of its physical structure.

While the particular pole lamp herein shown and described in detail is fully capable of attaining the objects and providing the advantages hereinbefore stated, it is to be understood that it is merely illustrative of the presently preferred embodiments of the invention and that no limitations are intended to the details of construction or design herein shown other than as defined in the appended claims.

I claim:

1. In a pole lamp to be supported by and between floor and ceiling surfaces including a plurality of elongated portions joined together in end to end relation to form a single pole, said pole having means at its ends for engaging said floor and ceiling surfaces for supporting said pole in a vertical position, the improvement comprising: means supporting the opposite ends of an elongated fluorescent lamp between and in axial alignment with respect to upper and lower portions forming said pole, said elongated lamp being intermediate said upper and lower portions, and means concealed within said pole for conducting electrical energy to both ends of said lamp.

2. The invention according to claim 1 in which said means supporting said elongated lamp includes means positioned laterally thereof.

3. The invention according to claim 2 in which said lateral supporting means comprises a pair of elongated members disposed laterally closely beside said elongated lamp and in which the receptive ends thereof are secured to said upper and lower portions to form a part of said pole.

4. The invention according to claim 3 in which said lower portion of said pole extending axially below said lamp has first telescoping adjustment means for lengthening and shortening said pole.

5. The invention according to claim 4 in which an upper section of said lower portion of said pole axially disposed below said elongated lamp is telescopically and rotatably connected to a sleeve secured to said lateral support means, and in which said last-mentioned telescopic connection has longitudinally adjustable means.

6. The invention according to claim 5 in which said last-mentioned adjustment means comprises a longitudinal slot in the upper end of said lower portion opening into a connecting inclined slot, said upwardly inclining slot having spaced seats for a projection, and said sleeve having an inwardly directed projection sized to slide in said slots and to seat selectively in said seats, said projection being adapted to hold said sleeve and said lower portion in adjustment when fitted in one of said seats and with the respective end portions of said pole in snug supporting engagement with said ceiling and said floor.

7. The invention according to claim 4 in which said first adjustment means is comprised of a first lower member of said lower portion extending into telescopic relationship with a second lower member of said lower portion, said second member having vertically directed slots circumferentially spaced and terminating in an end thereof in said telescopic relationship, an internally tapered sleeve threadedly engageable with said second member enclosing the slotted end thereof, said sleeve being in a pressure exerting relationship with the slotted end of said second member when threadedly tightened thereon so as to compress and tighten said end on said first member.

8. The invention according to claim 6 in which an elongated shade extends from a portion of said pole above said elongated lamp to a portion below said lamp, said shade extending outwardly from said elongated lamp to screen the light coming therefrom.

9. The invention according to claim 6 in which a reflector extends from said pole upwardly of and adjacent said elongated lamp to a portion of said pole adjacent and below said elongated lamp, said reflector extending outwardly of said elongated lamp to reflect the rays of light emanating from one side of said elongated lamp toward the opposite side thereof.

10. A pole lamp assembly comprising an elongated pole of adjustable length adapted to be supported between the floor and ceiling of a room, said pole lamp assembly being characterized by the provision of means for detachably supporting an elongated illuminating lamp coaxially of the mid-portion thereof, said assembly including a pair of elongated rigid connector means positioned laterally of said lamp with their opposite ends securely attached to said pole assembly adjacent the opposite ends of said lamp, said rigid connector means being of substantially smaller cross section than said lamp and positioned closely beside said lamp to cast a shadow of

minimum size closely spaced to the side of said lamp.

11. A pole lamp assembly as defined in claim 10 characterized in the provision of a pair of lamp seating adapter means facing toward one another and adapted to receive and interlock with the electrical terminal connectors present at the opposite ends of elongated type fluorescent lamps, and wiring connections concealed within said pole lamp assembly for completing an electric circuit with a lamp when mounted in said lamp seating adapters.

12. A pole lamp assembly as defined in claim 11 characterized in that said rigid connector means include a plurality of elongated members positioned along diametrically opposed sides of the lamp-seating portion of said pole assembly and having a cross-sectional area materially smaller than the cross-sectional area of said lamp.

13. A pole lamp assembly as defined in claim 12 characterized in the provision of means for supporting a light diffusing member spaced outwardly from and parallel to said lamp on a side thereof positioned circumferentially between said rigid members.

14. A pole lamp assembly as defined in claim 13 characterized in that said supporting means for said light diffusing means includes a support bracket carried by said pole adjacent either end of said lamp and having provision for detaching and attaching a light diffuser member without need for fasteners.

15. A pole lamp assembly as defined in claim 10 characterized in the provision of a light dissipating and diffusing member comprising an elongated relatively narrow member, and bracket means detachably connectable with the opposite ends of said light diffusing member and mounted on said pole assembly to either end of said lamp.

16. A pole lamp assembly as defined in claim 10 characterized in that said pole assembly includes at least one pair of telescopically assembled sections, means adjustably clamping said sections in different extended positions including means for forcibly extending said sections by a predetermined axial extent as an incident to the final tightening movement of said coupling.

17. A pole lamp assembly adapted to be installed in an upright position in a room with its opposite ends frictionally engaged against the floor and ceiling, said pole assembly including a plurality of sections telescoped together, lamp supporting socket means mounted thereon together with a service cord and manually operable switch means controlling the supply of electric current to said lamp socket means, coupling means between said telescoped sections operable while being tightened to axially extend and hold said sections firmly and rigidly locked in a desired extended position including cam and detent means effective to forcibly extend said sections by a predetermined additional axial increment as an incident to the final tightening movement of said coupling means.

18. A pole lamp assembly as defined in claim 17 characterized in that reversed operation of said coupling means after being tightened includes means for releasing said sections for reverse axial contraction thereby to withdraw the opposite ends of said pole assembly out of strong frictional engagement with the room floor and ceiling and thereby facilitating removal of said pole lamp assembly.

19. In a pole lamp assembly adapted to be supported in an upright position with its opposite ends frictionally pressed against the floor and ceiling of a room, lamp-mounting socket means carried by said assembly between the opposite ends thereof, said assembly having a pair of sections telescoped together and including cooperating cam and detent means for holding adjustment of the same in a desired extended position, said adjustment including an elongated slot extending along a generally helical arc along the wall of one of said sections and having at least one notch therealong, and pin means projecting into said slot from a fixed position on the other of said sections and effective as said two sections are rotated relative to one another to extend said sections until said pin seats in said notch to lock the sections extended with their opposite ends forcibly pressed against the floor and ceiling.

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UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,072,784 January 8, 1963

Zelvern W. Mann

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 4, line 15, for "receptive" read -- respective --.

Signed and sealed this 6th day of August 1963.

(SEAL)
Attest:

ERNEST W. SWIDER
Attesting Officer

DAVID L. LADD
Commissioner of Patents